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The **Journal of Educational Sociology**

A Magazine of Theory and Practice

EDUCATIONAL VALUES

David Snedden, *Issue Editor*

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EDITORIAL

Civilized societies create schools to promote, not all learnings, but only certain kinds which are believed to be both difficult to ensure and highly valuable in results.

But what are the learnings which are so hard to acquire and so precious that the expensive agencies of schools and teachers are essential to their achievement? For centuries that query has been answered in terms of social customs and philosophical beliefs. But answers so derived no longer suffice any more than similarly derived guidances suffice in medicine, agriculture, or engineering.

What "learnings" are of most worth in a time when civilization's geometrically accumulating culture presses upon our schools ten or a hundred times more apparently valuable possibilities of learnings than our learners can by any possibility assimilate?

Scientific hypotheses and findings in answer to that query can be derived only from social-science foundations. In an immediate and superficial sense the values of learnings may seem to be largely personal. But more critical consideration will show that the functionings of learnings towards economic success, civic competency, moral behaviors, cultural enrichments, and the other controls and achievements of "the good life" are mostly social. Only by incessant reference to the social conditions and opportunities

likely to confront our learners during the next half-century can we determine what are for them, in their several varieties, learnings of probably the greatest worth.

Hence, the editor of this number of *THE JOURNAL OF EDUCATIONAL SOCIOLOGY* has sought to assemble a series of papers dealing primarily with problems of educational values. Especially has he urged contributors to suggest and illustrate techniques by which such values might now be estimated or be presently more accurately determined. If the results do not seem to fulfill all expectations of the reader, he must take that as evidence not only of the immaturity of the applied science of educational sociology, but even more of the complexity of that important branch of educational sociology which will some time be called the science of educational values.

DAVID SNEDDEN

SOME TECHNIQUES FOR THE QUANTITATIVE STUDY OF VALUES OF LEARNINGS

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In this article we shall briefly illustrate certain techniques for the quantitative investigation of the problem of values of learnings with studies made under the writer's direction at the Pennsylvania State College. Apart from the cumbersome involved, the title might better be Some Penn State Studies Illustrating Techniques for the Quantitative Investigation of Values of Learnings.

1. There is, first, the type of investigation that attempts to determine what particular learnings are needed for meeting the detailed situations encountered in life. Hundreds of such investigations have been made, analyzing different areas. Illustrative ones are abstracted in Rugg's *Curriculum Studies in the Social Sciences and Citizenship*, Bobbitt's *Curriculum Investigations*, Curtis's *A Digest of Investigations in the Teaching of Science*, and Shorling's *A Tentative List of Objectives in Junior High School Mathematics*. As a concrete example of such study, we mention an investigation of the "French Vocabulary, Grammar, and Phonetics to be Taught to Enable Pupils to Read Current Literature Intelligently" (Margaret L. Kretchman, master's thesis, 1932). Miss Kretchman examined 15,000,000 running words in 6 American newspapers, 5 magazines, and 3 novels in order to discover what French words, idioms, and grammatical constructions were encountered in them. She found 1,205 different French words, with an aggregate frequency of 8,810. That indicates an average of one unnaturalized French word for each 1,700 running words. Three hundred and fifty-eight different idioms were met, with frequencies ranging from 1 to 94. A classification of the words and the idioms by frequency and an analysis of the phonetic and grammatical elements showed which are the most important items for a course in French

as far as the particular objective of understanding references in popular English literature is concerned.

2. Next, having a certain indirect bearing upon our problem, is the analysis of textbooks, courses of study, and other evidences of school offerings, to determine what they attempt to do to promote valuable learnings. Here again a large number of studies have been made. We shall choose one by J. W. C. Remaley as an example (master's thesis, 1931). Mr. Remaley undertook to compare the aims of general science with the content of recent textbooks in that subject. In order to get objective evidence on what the alleged aims of this subject are, he analyzed 96 journal articles on aims and values of general science and counted the frequency with which each aim or value was alleged. This yielded a list of 62 different aims with frequencies of 2 or more, which were classified under 16 broader types. Next he analyzed 9 recent texts in general science and made a showing of their distribution of space to topics and to types of topics. This display was very detailed, the list of items with their frequencies for each of the books and for all combined covering 125 typewritten pages. Then Mr. Remaley surveyed this factual showing of what the texts offer in comparison with the alleged aims of the subject in order to determine to what degree the texts seem adapted to the pursuit of the asserted objectives.

Similar studies of ours of this general type are: Morgan on the content of textbooks in biology, Henshaw on the content of high-school chemistry texts in relation to problems of the home, Stock on algebra texts, Bingham on supplementary reading material in Latin, Altman on the content of standardized tests in American history in relation to social objectives, and Winn on the material in women's magazines relating to marital problems.

3. A third type of study seeks an answer to the question: What learnings do pupils actually apply in life? Mr. C. E. Whipple gives an example of such research (master's thesis, 1930). He sought to learn what elements of physics (processes, laws, concepts, etc.) are applied in control or

interpretative uses by students who are taking a course in physics in high school. One technique involved having pupils keep diaries in which they noted each day the applications they had found themselves making of materials learned in physics—whether these were applications in control or in interpretation. A second technique involved placing before the students at the end of the course a long list of the facts, laws, and concepts that had been taught and asking the pupils to indicate opposite each the frequency with which they believed they had had occasion to use that item since learning it, either for purposes of control or of interpretation. The categories were: none, little, occasional, considerable, and great. These verbal terms were then given numerical weights by the investigator and indices of frequency of use determined for the several items by averaging the moments corresponding to the words checked by the pupils. From the first technique a list of 177 different items was obtained with frequencies ranging from 1 to 121. A few of the topics, with their respective frequencies, most applied in practice were: electric motors, 121; electric lights, 93; telephones, 82; air pumps, 15; ammeter, 15; refrigeration, 14. From the second technique accrued utility indices for a long list of items. Mr. Whipple found close agreement between the findings by his two techniques and for two different schools in which the investigation was conducted. For the second technique the reliability coefficient of the index values was .945.

4. A fourth form of investigation is analogous to the second technique by Whipple but better controlled. It is best illustrated from a study by Robert P. Wray (doctoral dissertation, 1932). Dr. Wray investigated the relative functioning value of items in chemistry education in affording pleasures of recognition. He made practically exhaustive lists of the facts and laws likely to be taught in courses in high-school chemistry, aggregating 1,500 items. These he submitted to various groups of people who had studied chemistry some time in their previous careers: high-school students, college students, physicians, teachers,

engineers, business men, housekeepers, etc. Each person was asked to check in a column one of 5 words indicating how frequently he had had occasion to use this item in interpreting what he encountered in his environment or in his reading and, in a parallel set of columns, the degree of satisfaction he had experienced in making such interpretations by reason of a knowledge of the item. Medians of the frequency values were then computed for the item for each type group responding, and, similarly, medians for satisfaction values. These two medians were multiplied together for an index value of the item for the group. Thus a measure for the functioning of the knowledge in interpretation was derived for each of the 1,500 items for as many type groups as participated in the study.

It was found, however, that the different type groups agreed with one another so closely regarding relative values that it seemed unnecessary to continue using more than one group. The intergroup correlations, when corrected for attenuation, averaged .896 on list of items number 1 and .849 on list number 2. For the remaining 13 lists of items, therefore, responses were sought for only student groups. The reliabilities for the index values were very high, the coefficients being around .95. By correlation with other criteria, Dr. Wray's findings show collateral evidence, not only of high reliability, but also of satisfactory validity.

Other investigations of ours involving essentially the same technique are: Himes in biology, Aber in chemistry, Rice in agriculture, and Lick in psychology. In spite of the fact that at first we feared this technique as too subjective, it has proved in all of our applications to give remarkably high reliabilities and high validities where groups of respondents of 30 or more individuals were used.

5. The fifth technique is controlled experimentation. This may be illustrated by a study by Miss Alice K. Milson to ascertain whether systematically teaching courtesy in the junior high school causes measurable changes in the conduct of the pupils taught (seminar study, 1933). Three

experiments were made: one in the seventh grade, one in the eighth, and one in the ninth. In the seventh grade 20 girls who were to have instruction in courtesy were matched on the basis of average scholastic grade with 20 who were not to receive such instruction. In the eighth grade 16 pairs were similarly matched and in the ninth grade 22 pairs. As a measure of initial attainment in courteous conduct the pupils rated one another on a five-point scale, each pupil rating 10 girls whom she knew best, selected at random from both those who were to become the experimental group and those who were to become the control group. A score for each pupil was then obtained by averaging the ratings assigned her by her classmates. To persons who have not had experience with pupils' ratings of one another, this may seem to be a very poor means of measurement, but we have had much experience with such ratings and find them highly reliable and presumably highly valid. We shall give some evidence on this matter in the December number of this magazine.

Having matched the groups for general scholarship and having taken the initial measurements, the investigator held discussions on the technique of courtesy with the experimental groups but no such discussions with the control groups. These discussion periods were conducted weekly for a period of three months and each was of about 15 minutes duration. Other conditions were kept constant as far as possible. At the end of three months, a second set of ratings was taken similar to the first and, without further instruction, a third set at the end of another three months. In all except one comparison, the groups that had the instruction showed greater gains in courtesy ratings than the control groups. Between first and second rating periods these superior gains in steps on the five-point scale were: ninth grade, .73, eighth grade .68, and seventh grade, .42. Between first and third ratings the superior gains for the experimental groups were: ninth grade, .39, eighth grade, .76, and seventh grade, .06. Tested in comparison with their standard errors, all of these differences except two

are individually statistically significant and jointly carry high reliability. Miss Milson, therefore, concludes that in her type of population the sort of instruction in courtesy used in this experiment makes a measurable difference in the conduct of pupils. During the past academic year we have had in operation some 20 such controlled experiments on the question: Does instruction in morality function in practice? We shall give an account of these experiments in the December issue.

6. Another means of investigating the functioning of learnings is by the growth curve. Mr. William A. Herr (seminar study, 1933) determined the normal growth curve of students in the public schools of Hazleton, Pennsylvania, from the third grade to the twelfth in the vocabulary of social science. On the basis of this curve he predicted what score in such vocabulary his set of students, beginning with the seventh grade, should be expected to make at the end of the school year, and similarly what the students entering the eighth and the ninth grades should make. Then he applied to his pupils systematic teaching of vocabulary in this area and prepared to ascertain to what extent such teaching would deflect their progress from that of normal growth. While the growth curve as it had been rising on the basis of previous policy (or rather lack of constructive policy regarding social-science vocabulary) predicted for the seventh grade an average score of 50.2 words, the grade made an average of 82, a deflection of 31.8 words from the predicted position. Similarly, the eighth grade scored 81.2 instead of the predicted 70.0 and the ninth grade, 93.9 instead of the forecasted 85.3. These differences between actual scores and predicted ones were from 5.28 to 15.96 times their standard errors, so that conclusive evidence was obtained that the new policy regarding the teaching of social-science vocabulary was effective in improving these vocabulary abilities.

Studies of recent years have yielded some fascinatingly interesting facts about the curve of growth. The educational research worker now most active in this field is Dr.

S. A. Courtis. He believes that all growth curves are of substantially the same shape—S-shaped curves with the inflection in the lower loop greater than that in the upper loop, and functions of a formula employed more than a century ago by Gompertz:

$$y = a^{n^t}$$

Courtis has provided machinery by which the S-curves are projected on a straight line, and by which the curve for a particular set of data may readily be found and predictions made in terms of it.¹ Measurement of the influence of a learning factor in deflecting the growth curve should prove an effective device for studying its potency.

7. Then there is the technique of correlation. Tetra-choric correlation, involving a simple fourfold correlation chart, is especially promising in a field in which we experience difficulty in making precise measurements. Harry L. Kriner (doctoral dissertation, 1931) secured from superintendents and supervisors of instruction the names of 130 best teachers in 20 cities and, correspondingly, 130 poorest teachers in these same cities. He then collected, by interviews and from records and other sources, various facts about these teachers. These facts he organized into four-fold tables like the one on this page. The chart shows

	— ← Success → +	
+ ↑ Latin ↓ I	b 50	a 95
	80 d	35 c

¹This is most fully set forth in his *Measurement of Growth* published by Brumfield and Brumfield, Ann Arbor, Michigan, 1932.

50? ← a hypothetical case. Of the 130 best teachers, 95, we shall say, had had more than two years of Latin in high school and 35 had had two years or less. Of the 130 poorest, 56 had had more than two years of Latin and 80 had had two or less. The general trend of the numbers shows that there is a tendency, according to this hypothetical case, for the good teachers to have more Latin and the poor teachers to have less; that is, there is a positive correlation between success in teaching and the amount of Latin studied in high school. A numerical value for the degree of this correlation can easily be calculated. Dr. Kriner computed such coefficients of correlation for many factors in relation to success in teaching. For elementary-school teachers, a few of these r 's were: Latin carried in the secondary school, .354, French carried in the secondary school, -.146, mathematics beyond two units, .447, social studies beyond two units, -.335.

If the whole of both distributions is considered and normality of distribution may be reasonably assumed, the formula to be used is one developed by Karl Pearson:

$$r = \cos \frac{\sqrt{bc}}{\sqrt{ad} + \sqrt{bc}} 180^\circ$$

If only the tails of one of the distributions are used, as was the case in Dr. Kriner's investigation, this formula gives r 's much too high. For a number of years the writer of this article has been seeking a satisfactory formula for tetrachoric r 's where the dichotomies in one of the distributions are widespread instead of continuous, as they are in the illustration cited, for in social research it is far more convenient to deal with the extreme tails than with the whole of distributions. Within the past year he has succeeded, by the aid of a colleague from the department of mathematics, in developing such a formula by departing at a certain point near the end of the original development by Pearson.² The resultant formula, provided the tails

²Karl Pearson, "On the Correlation of Characters Not Quantitatively Measurable," *Philosophical Transactions of the [British] Royal Society*, Series A, Vol. 195, pages 1-47, especially pages 1-7.

are symmetrical—same percentage at each end—and provided the dichotomy in the unmutilated distribution is at the mean, is:

$$\frac{p\sqrt{2\pi}}{2z_k} \cdot \frac{\sqrt{ad} - \sqrt{bc}}{\sqrt{ad} + \sqrt{bc}} = r - \frac{r^3}{6}(k^2-1) + \frac{r^5}{40}(k^4-6k^2+3) - \frac{r^7}{336}(k^6-15k^4+45k^2-15) + \dots$$

where p is the percentage of the whole population remaining in either tail, z_k is the ordinate for the normal distribution of unit area and unit standard deviation at the inner boundary of the tail, and k is the distance from the mean of the distribution to the ordinate z_k in sigma units. Both of these last values can be read from a table of the integral of the normal curve, one of which is to be found in the appendix of Kelley's *Statistical Method*. In Kelley's table z_k is labeled z , and k is labeled x . If it is the middle 68 per cent of the distribution that is chopped out, leaving 16 per cent in each tail, the formula, greatly simplifies k for then $k=1$ and all the terms containing r 's may be neglected except the first power, unless r is high. We are now setting up nomographs from which the correct r for any tail may be read directly after a solution of the equation for r to the first power, which will make the formula very easy to handle in practice. Armed with a means of computing tetrachoric correlations from widespread dichotomies, we can get at many problems hitherto impracticable. For example: Given 200 exceptionally good citizens, and an equal number of very poor ones, and being able to learn that each of these was above average or below average in each of several types of learnings, what is the relation of such learnings to good citizenship? Given 500 best teachers and 500 poorest teachers, and knowing whether each was above average or below average in professional training, or in other factors, what is the correlation between professional training or other factors and teacher-success?

Countless additional topics of that type will suggest themselves. The proof of the above formula, together with the statistical formulæ and their proofs needed for all the other procedures discussed in this article, will be published shortly in a book on advanced statistics by the writer and Mr. VanVoorhis.

8. Finally, there is the rather new technique of tetrad differences. This is too complicated to permit an attempt to explain it here to those not already acquainted with it. It is not, however, difficult to use in practice, although the arithmetic is likely to become very laborious. It must suffice here to say that the technique permits us to learn whether or not there is some common element in a number of factors and, if so, which of the factors is most saturated with that common element. Concretely put, we might determine by this technique whether there is some basic common element in liberal education and, if so, what studies are most representative of this basic element. We have not ourselves yet made any investigations with this technique involving the question of values of learnings, but an elaborately analyzed one involving this theme in some degree is set forth in Kelley's *Crossroads in the Mind of Man*.

It will be observed that in this article we have not raised at all the question of what values are "good" or "real" or "true," nor have we considered techniques even for determining what values are cherished by peoples. We have merely proposed, and briefly illustrated, a few procedures for determining what learnings contribute towards the attainment of certain objectives when once educational engineers wish to seek those objectives in the belief that they hold worth-while values. But even for the objective investigation of values, and certainly for the description of values cherished by peoples, some headway has been made and much more progress lies ahead as a future possibility.

EDUCATIONAL VALUES: WHENCE AND WHITHER

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Since the concept of values as referred to in this paper is a sociological one, it is desirable at the start to make clear its meaning. "Values exist only in relation to desires," wrote Bouglé and added that "wherever found, a value is a *permanent possibility* of satisfactions." W. I. Thomas gave us this definition: "A value is thus any object, real or imaginary, which has a meaning and which may be the object of activity. The sum total of the values of a society is its culture." Educational values may naturally be thought of in relation to society's desires and supposedly offer permanent possibilities of satisfactions. They have meanings for society and, because of these meanings, these educational values constitute the objects of society's activities in the field of education.

However we may interpret Bouglé's use of the word "permanent," we must consider that the satisfactions sought are to be thought of as relatively lasting and not simply passing or temporary in character, yet not so permanent or lasting as to allow for no change. Further, since values constitute in their entirety a nation's culture, we must think of educational values as integrated with the values associated with the other institutions and so intimately related to them that changes in other parts of the culture will presumably have a definite effect on the educational values. If we wish to view this process from the opposite angle, we may consider that changes in our educational values and corresponding changes in our educational activities, which seek the realization of these changed values and the satisfactions to be derived from them, will have a corresponding influence on other parts of the culture.

It would seem then from the standpoint of sociology that several facts appear to be clear. First, our educa-

tional values are parts of our social heritage, which, being thought of from the standpoint of humanity rather than from that of a nation or smaller unit, go back to the uncertain and vague beginnings of the accumulation and transmission of the fruits of human efforts to live and derive maximum satisfactions from life. Secondly, in view of this long history, such educational values may not be carelessly discarded. Yet, in view of the total changes occurring in our culture, it would seem that these values must be modified if a more perfect adjustment is to be secured between education and the other social institutions, resulting in a reduction of a certain amount of cultural lag and its attendant problems. Such modifications of values have occurred many times in the long history of human educational efforts. In the third place, we are realizing anew in these days of emphasis on social planning that many social experiments are based largely on the hypothesis that through education profound changes in the culture as a whole may be brought about. If such changes are to be brought about, it would seem that there should be a most careful consideration and evaluation of the changing culture, the social trends, and the values and satisfactions sought by the present generation. It would appear, therefore, that the educational values which dominate our educational system today are the products of society's search for satisfactions in the past and that the changes which are taking place today in society's values are due to a certain amount of dissatisfaction with life as it is and to the hope that by taking more careful thought for the morrow, life can be made more adequately satisfying.

From the sociological standpoint, therefore, it would seem that a search for the values which should be the objects of our educational activities today must be based on an understanding of our present generation's interpretations of values and on its vision of the values which the coming generation will seek. Instead, we often find two very different methods used. One of these is to start with educators, as such, and ascertain from them their com-

bined judgment of the desirable educational values. For example, we read in the third report prepared by the Committee for Elementary Education of the New York State Council of Superintendents, dated October 1, 1931 (page 13), "Three years ago through the coöperation of the principals and teachers of some 50 different elementary schools there was formulated the following statement of the cardinal objectives of the public elementary schools. . . ." There follows a list of six objectives which constitute the summary statement of what is designated as "the function of the public elementary school." While in the judgment of the writer this is a most excellent list, so far as it goes, it does appear significant that the critical evaluation of this list was largely done by "the rank and file of teachers." This raises the question as to whether or not these educators constituted the best authorities on the satisfactions sought by society and the evidences of dissatisfactions experienced by society and observed in our changing culture. The judgment of educators as to the best methods of reaching through educational activities the goals desired by society would be invaluable. But the question may properly be raised as to whether or not the best representatives of any single social institution are safe guides in our search for educational values. Education undertakes to prepare children to live richly and adequately in their total social environment and not simply or even primarily in their school situations. Evidence seems to be quite lacking that educators understand this total social environment sufficiently well to enable them to indicate with finality the goals that society is seeking and their implications for educational procedure.

A second procedure which has been used in the search for values is to start with our present curricula and to seek to work out the finest goals to which those curricula may be found to lead. The present generation of educators owes a very great debt to many tireless workers in this field. They have shown how it is possible to determine to what extent these goals have been reached and how

by more reliable methods a greater degree of success in attaining these goals may be secured. But all this is a contribution to superior work towards reaching old goals rather than a critical consideration of society's present choice of goals or of the directions in which society is moving in search of greater satisfactions.

The conclusion of the above reasoning is manifest. To-day we cannot be concrete or specific in our statement of educational values any more than Columbus could be specific as to the nature of the land which he sought. In spite of the fact that he did not realize several of his chief aims, he did know the direction in which to travel and, because he moved in the right direction, he has been honored by many successive generations. In our search for educational values, we crave definiteness. Thanks to the wonderful contributions made by specialists in the field of measurement in education, we have many techniques that enable us to be very definite and very specific. Some day we may be able to be similarly specific in this field of educational values and perhaps can be so now in certain aspects of it, but it appears to the writer that emphasis needs to be laid on a careful consideration as to directions in which to move rather than on a listing of specific details.

Towards what directions, because they afford the greatest promise of giving light on our problems of values, should we move? We find at least three such directions. In the first place, we begin our search with the realization that human individuals are fundamentally biological beings. While they are capable of becoming human personalities as a result of their experiences in society, they never cease to be fundamentally biological organisms. In the second place, we realize the tremendous influence of these experiences in society, of the culture into which the potentially human biological being is born. Whatever may be the capacities with which any particular individual is endowed at birth, we recognize that both the degree to which those capacities develop and the form which their development takes are largely determined by the characteristics of the

culture into which the individual has been born. The third factor is that which has already been indicated; namely, the particular individuals with whom he may have social relations and by whose influence he is molded.

By way of illustration of these three factors we might suggest the picture of a man in a small boat seeking to cross a great river in its lower reaches. The degree of his success or failure will depend in part on the stuff out of which he is made. If he is strong and alert and otherwise equipped by nature to handle his boat, he stands a reasonably good chance of a successful crossing. In the second place, his crossing will be greatly influenced by the condition of the river, which has come many hundreds of miles down from its sources in the mountains and has been greatly influenced both by the territory through which it has passed and by the tributaries flowing into it above the point of the crossing. Finally his crossing will depend on his past experience with boats and boatmen and his resultant skills and familiarity with boats and the river.

In considering educational values in any adequate sense it would seem that we must consider all three of these factors, not any two of them or simply aspects of any one of them. We must move in three directions for light on our problem. Starting with the biological factor, we realize that much help has already come from the biological field by way of psychology. We know, for instance, that so far as our present knowledge goes certain individuals, because of their nervous or glandular systems, will never develop to the extent that the average individual does. For such, educational values must be stated quite differently than for individuals of average or superior biological endowment. It would appear that there are numerous other contributions which biologists are even now in a position to make regarding educational values if educators will but more actively seek their coöperation. For example, it appears now that, of those students in our high schools today, about as many will become inmates of hospitals for nervous disorders as will become college students; that is, one out of

twenty in each case. In other words, there are numerous individuals who are not prepared to live in our modern social situations without breaking, whether such breaks are due to the weakening effects of disease or to the stresses and strains of modern life. When a great dam gives way before the heavy pressure of the waters which it is expected to hold back or a bridge is unable to stand up under the heavy stress of the traffic to which it is subjected, we tend to hold the engineers responsible for not taking adequately into account all the factors involved. By similar reasoning, to what extent are we, as educators, responsible when we allow to pass out of our schools each year many who are destined to break under the stresses to which they will be subjected? There appears here a challenge which seems to call for the further development of another linking science which would be a sort of biological-educational sociology. Such a science would help educators to know in general how to recognize those whose abilities to stand strains are definitely limited and who accordingly need the kind of education that will most likely prepare them to live without breaking. When we think of educational values we must seek, then, not only the coöperation of educators but of those who can best help us to understand the implications for education of the more recent developments in the field of biology.

The second area in which we may expect those seeking educational values to look is that of culture, both in its more lasting aspects and its more recent changes. The last several years have seen published a huge amount of material regarding culture but particularly regarding the most significant changes taking place in it. As an illustration of such material might be mentioned the recent report of the President's Research Committee on *Recent Social Trends in the United States* with its accompanying monographs. Although quite different in character but also most helpful in our search for educational values as viewed by the sociologist is the *Report of the Commission on the Social Studies* appointed by the American Historical Asso-

ciation which is in process of publication. If educational values are to be sought as integral parts of social values, then the clear indications of the changing social values must be carefully studied by those who seek to clarify for us the values to be sought by educational processes. It would seem that among educators those specializing in educational sociology would be the best prepared to interpret these changes, but the work must be done in no narrow sense. It would appear that the most cordial coöperation is needed here of specialists in the fields of economics, recreation, the family, politics, and religion, to mention but a few, if the educational values are to be based on the more recent developments in the general field of the social sciences.

The third area in which we must seek for light on educational values is that of social relations. This area cannot be clearly marked off from the first two, but nevertheless appears to have certain aspects distinct from them. This is the area worked in by social psychologists and it is encouraging indeed to see the amount of literature of careful scientific quality that has been issued during the last few years which may be used to great advantage in our search for educational values. It seems almost axiomatic that life's deepest joys and most permanent satisfactions are experienced when we are aware of harmony with our fellows; and, contrariwise, life's most poignant disappointments and tragic experiences follow our realization that we are out of harmony with our fellows. Some years ago Hornell Hart declared that the central problem of sociology is "how purposes are to be fitted together so that they shall stimulate, reinforce, and develop each other instead of thwarting and defeating each other." Later he adds that "the destructive phases of conflict must be eliminated without losing the creative phases." Such a goal as social adjustment, described in these quotations, must include not only the coöperative efforts of individuals but also those of the larger groups, such as social classes, nations, and races. Whoever states educational values

must include the light from this area. It is encouraging to note here also the development of another linking science, an educational-social psychology.

Underlying the position taken in this paper is the assumption that educational values are subordinate to life's values as these are interpreted by the generation that is at any time in control of the schools. It appears that the core of the dominant philosophy today is that the greatest values of life are to be found centered in personality. If this be accepted, then education would seem to consist of a series of experiences through which the less experienced persons are guided by the more experienced in such a manner as will result in the educands' development as fully as their original biological equipment makes possible, to the end that they may, on the one hand, enter as fully and completely as possible into the possession and enjoyment of their social heritage and, on the other hand, coöperate with their fellows in creative, constructive efforts to enrich life.

On the basis of the past history of humanity and of the changing culture of today, it would appear that educators are not in any position to state by themselves what the educational values shall be, but that their discovery must result from the coöperative efforts of our finest specialists in the fields that impinge so essentially on that of education—the human biologists, the social scientists, and the social psychologists.

This task of discovering educational values will never be completed with any degree of finality, for each new generation will need to have certain modifications made as its culture, "the sum total of the values of a society," changes. It would seem, then, that gradually there might arise a type of specialist who would render this continuing service of interpreting life's goals and the inherent educational values—a type of specialist whom we might christen educational-valuist.

THE VALUING OF LEARNINGS

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Two purposes have dictated the writing of the following analyses. First, in these days of pedagogical confusion we need persistently to remind ourselves that schools are supported at large expense only to ensure acquisition of some specially valuable learnings. Second, traditional and opportunistic methods of valuing learnings in vague, generalized, and too often "aspirational" terms need urgently to be replaced by more analytical and realistic evaluations in order to ensure efficiency in the work of schools.

Unfortunately, these two types of needs have long suffered the familiarity which breeds first contempt and then obliviousness. Hence, for the sake of indispensable orientation, the first section of this paper must review certain considerations which ordinarily should be stale commonplaces.

I. SOME COMMONPLACES

The final immediate products of nearly all school-controlled educative or teaching processes are learnings. Learnings may, obviously, be very specific, even minute; or they may be very composite, generalized, and integrated. It will often prove serviceable to classify these learnings as to skills, knowledge, ideals, attitudes, tastes, habits, aspirations, and others.

Human beings, we know, are inveterate learners. All normal children are filled with curiosities, are incurably experimental, and are persistently imitative and suggestible. Without any intention on the part of elders, growing children ceaselessly form habits, acquire attitudes, increase knowledge, keep their imaginations at work, develop skills, and form powers of coöperating.

But academic workers seem often to forget that learning propensities are active throughout all the years of maturity and old age, as well as in youth, though with certain kinds of changed incidence. All gossip, all newspaper reading, and much of travel are entered upon and keenly enjoyed because of their contributions of new knowledge, new beliefs, new appreciations.

Academic minds also seem often to be unrealistic in making distinctions between learnings acquired from schools and from extraschool sources. In certain sheer quantitative senses it seems probable that persons who have never attended schools will have acquired by the age of thirty as many and as varied learnings as those who have been sent to schools. But, of course, many of the learnings of, let us say, adult savages or fairly well civilized, illiterate adults will be very different and, for the sake of the educator's profession, let us trust, of much less value than those of thirty-year-old well-schooled persons.

Schools have evolved, it is clear, as agencies to assure only certain kinds of learnings—perhaps not five per cent of all those which prove most functional throughout child life, nor more than ten or fifteen per cent of those which prove usefully functional throughout adult years. Most of vernacular speech, of health-conserving behaviors, of small-group moralities, of vocations, of simple arts of daily intercourse and living, of food preferences, of dressing practices, of social games, and the like have never been learned in schools.

Presumably, all schools, from kindergartens through professional colleges, have been created by men to assume responsibility for only those kinds of learnings which have these two characteristics: they are supposed to be very valuable learnings; and they cannot well be acquired from extraschool sources.

But when, where, and for what purposes do learnings possess values? Obviously, only as they contribute to the

"valued" purposes of living persons, either in their personal or in their group-conserving rôles. Some learnings may have their chief values in just the immediate pleasures they produce—as in satisfactions of curiosities and in experiences of an aesthetic character. Some other learnings may tangibly enhance personal powers of doing productive work, of earning a living. Still others are expected to function as those kinds of loyalties and devotions which state-maintaining peoples have long called patriotism. Beside all these are learnings desired, by guardians or mature learners themselves, to enhance and integrate the qualities which make for enduring religiousness.

The old adage, "Knowledge is power," is clearly too broad. Only some knowledge gives power in meeting particular situations. Most kinds of knowledge, and even most degrees of specific knowledge, will not give power to Jones in 1930 towards earning a livelihood. Most forms of all possible knowledge can be of no conceivable value to Mary Brown, a young matron in California, in the present year.

II. SOME IMMEDIATE PROBLEMS

Some economists and engineers, writing on themes of machine production and of "technocracy," are telling us that modern power-driven mechanisms produce goods at such stupendous rates and with so little man labor that supply is now chronically outrunning demand and thus leaving millions with no chance to purchase, since they have no chance to produce valuable goods to offer in exchange.

Somewhat similar trends seem to be active in the world of learnings. Historians, chemists, geographers, and scores of other groups of specialists are now producing "intellectual goods" at such tremendous rates that the supplies offered to schools and colleges as desirable, supposedly indispensable, for learners far outrun any conceivable powers of assimilation by these learners. Take, for example, the

junior-high-school years—between childhood and youth. Upon these three grades converge high-pressure educational salesmen of mathematics, histories, English language studies, music, shopcrafts, vocational guidances, field sports, scouting, social sciences, geographies, natural sciences, graphic and plastic arts, foreign languages, household arts, English literatures, mental sciences, and other wares.

But many of these still childlike learners of our junior high schools have only meager resources with which to make purchases from the above lavish wealth of offerings—meager resources of learning powers, of time, of intellectual desires. Hence various kinds of congestions, satieties, stalemates.

Clearly, then, the pupils in our schools, and, above all, the policy makers who select courses and construct curricula for our schools, need light as never before on the "more valuable" of possible learnings. "What knowledge is of *most* worth?" was Herbert Spencer's key query of nearly a century ago. We educators, expanding Herbert Spencer's query, need to develop techniques through which to provide reliable answers to the detailed questions: "What learnings of knowledge, of skills, of attitudes—and many other acquisitions possibly to be made by mind, spirit, and body—are likely to prove of *most* worth?" But our selective efforts must go farther: "of *most* worth for persons of the type of Edward Brown whose intelligence quotient is slightly below the median, who will probably terminate school attendance at sixteen years of age, who will probably be for many years a manual worker?" Or, "of *most* worth for the purposes of enabling persons of the type of Joseph Anderson, deriving from spiritually meager environments, to combine relatively rich intellectual attainments for their personal satisfactions with powers of being relatively fruitful sources of 'good' to others in family, state, and other coöperative organizations?" All of this, obviously,

will require much planning, and effective planning involves laborious forecasting.

Much is being said these days about the possibilities of scientific planning. Much is being written, too, about possible guidances to be given to young persons in planning for their personal careers. And we also hear of city planning, investment planning, and budget planning. On occasions of visible failure or catastrophe we reproach ourselves that individually or collectively we did not sufficiently plan to forestall and prevent wars or depressions or losses of health or failures of crops.

In a sociological sense, all schools and colleges already represent the outcomes of gigantic and highly socialized, even if often very opportunistic, efforts at planning. They are expensive agencies provided to serve either personal or collective needs which will not be met for years, even decades, to come. Like large-scale agencies of national defense, city expansions, and transport, they must be built in the light of fairly long-range forecasts, else they are opportunistic and likely to lead only to chagrin over wasted opportunities.

The easiest of all planning can be done, of course, where we can be certain that the future will be nearly or completely like the past. Even very primitive men could plan for the daily recurrence of daylight and dark. Men who had reached early stages of civilization learned to plan for the coming of winter, for the rising of the Nile, for the migrations of game. When human cultures have become fairly static for considerable periods—in religious ritual or skilled crafts or fine arts or, as with us now, in the alphabet or spelling or masculine attire—it becomes easy for teachers to determine what children can best learn under tutelage. "That which was good for the fathers will be best for the sons."

Changing conditions, either of nature or of human cultures, obviously impose severe burdens upon forecasters

and planners. How can one plan for the future if there can be discovered no dependable regularities in the coming of day and night, of the seasons, of eclipses, of the locusts, of invading enemies, or of epidemics—or of economic depressions?

A relatively static order, then, renders forecasting and planning easy. Radical changes of order, which only rarely occur, may render them wholly impracticable. But for present-day educators it is civilized mankind's insistent demands for improvement, for progress, which impose the heaviest burdens of responsibility for forecasting and planning.

Progress in school educations can as yet be but slightly based on scientific forecasts. This is so chiefly because we do not yet have criteria of the values of learning. Nearly all progress thus far achieved in education—and obviously that has been no less relatively than ancient progress in the practical arts of agriculture, metal working, food preserving, and building—has resulted from "trial and error" procedures. But these means of "progress" are slow, uncertain, and wasteful. They are steadily being superseded by "scientific" methods in all those fields of productive effort in which "applied science" can be employed—and these are now including medicine, social work, and treatment of offenders, no less than navigation, animal breeding, or steel making.

III. THE VALUING PROCESSES

The *means* whereby all organic creatures live and grow to full possibilities have *positive values* or are *valuables* for them. Means of destruction or harm can be considered *negative values* or *disvaluables*.

In the plant and subhuman animal life the organic processes of acquiring valuable means to living (and of avoiding disvaluable means) seem to be largely automatic and nonconscious. But in large measure human beings evolve

partly conscious valuation-making processes which draw upon memories, imaginative projections, learnings from others, but also obscurely upon vestigial instincts, subconscious complexes, etc. The valuations made by men in most of the early stages of their personal or coöperative entries upon new, more complex, or more evolved fields of experience are of the nature of *estimates*, ranging from sheer guesses, intuitions, and impulsive reactions to carefully considered and coöperatively confirmed judgments.

Only in extensively studied areas—as now in certain departments of food values, therapeutic values, sickness-prevention values, insurance values, and commodities-production values (by scientific forecasts and invented mechanisms)—can valuating judgments be made so precise and trustworthy as to be called scientific. As noted earlier, hardly any of the valuations of learnings which educators, parents, and others are incessantly called upon to make can as yet be called “scientific,” any more than can the valuations which juries considering evidence, legislators enacting statutes, or committees passing upon art products be called scientific.

Nevertheless, practical men and women everywhere and at all times must incessantly make and abide by estimative valuations. Life and growth would otherwise be impossible. By impulsive and crude or by judicial and refined procedures all civilized adults are constantly estimating the values to themselves and to their relevant associates of foods and kinds of work, of recreations and friends, of investments and travels, of political policies and support of proposals for war offensives. Because they affect, if not our actual safety and comfort, at least our senses of coöperative harmonies and supports, we are also continually making valuation estimates of the behaviors, overt or potential, of other human beings. We pass judgments of good or bad, approvable or disapprovable, lawful or unlawful—all of the nature of estimates, and some considerably

affected, especially in mature persons, by the products of much philosophizing.

Even under the advanced conditions of modern cultures, most of the valuations by which men and women must live and work are of so *estimative* a character that they can hardly be called scientific. No one expects the valuations made by children, even in areas of food choices and disease preventions, to be scientific. It will easily be agreed that few adults are capable of making "scientific" predictive estimations of investment values, whereas, within limits, predictive estimations of securities and dangers of well-known navigational procedures can now be scientifically made.

In studying means of making valuation estimations of learnings more functional and reliable, though we cannot yet make them even considerably scientific, it will prove of great importance that we study carefully the procedures adopted in other fields of work in order to bring dependability and coöperative support into valuation estimates.

Widely used is the device or mechanism of the "jury," or grouping of evaluating "judges," all of whom, after seeing, hearing, and otherwise receiving evidence, and expert interpretation of evidence, formulate on a voting basis their collective estimates—their coöperative judgments of "value," their concerted valuations.

Mature and well-disciplined men also tend extensively to employ systematic analysis of component or contributive factors to situations where valuations of "wholes" must be made—in voting for candidates, in planning a house, in contemplation of marriage. In a sense, this is a sort of "budgeting process" in the effort to make valuations more reliable, to avoid overlooking essential factors, and to harmonize varying weights of unlike factors.

IV. SOME PRELIMINARY ANALYSES OF VALUES AND VALUATIONS OF LEARNINGS

The values or worths of learnings are to be estimated (and when we shall have fuller knowledge, computed) as

they affect the learner himself, or, through him, his co-members in his smaller or larger societies. Vices harmful to the person may be learned no less than virtues helpful to him. Some learnings may so function as to increase the present well-being of the individual, but at the serious expense of his wife, his neighbor, his vocational associates, or his fellow citizens in the state. Learnings which are "good" for the individual will, however, commonly prove also "good," through the behaviors of the learner, to his associates and federates in small and large societies.

As examples of the concrete analyses which the writer believes should be extensively made by educators constructing curricula, the following condensed statements are submitted.

1. The values of learnings are transformed from potential to actual or functional in behaviors, overt acts, achievements. Unused skills, knowledge, appreciations, ideals, or other learnings, like unused dollars or coal or water power, have *no* value in actuality. But, obviously, learnings achieved at one time may, in effect, be stored, like dollars or seeds or tools, and put to work, or made functional in human well-being at a later date.

2. Large proportions of the unconstrained, naturalistic learnings of small children in fairly normal household or neighborhood environments—learnings of speech, bodily controls, personal decencies, friendly coöperations, games, knowledge of nature, uses of simple implements, appreciations of aesthetic things, small group customs, danger avoidances, and others—are likely to have a fairly high value, either then or later (or both), for themselves or others, because of the selectively wholesale character of environmental sources of stimulation interacting on the instinctively wholesome learning preferences and propensities of the young.

3. Since adults in civilized societies find it necessary to discharge large proportions of life's functions (by which they procure food, ensure social order, conserve health, rear progeny, enrich personal culture, and assure their futures) through highly artificialized and technically elaborated conditions, it becomes indispensable that, after early years of infancy are passed, the learnings of children and youths shall be selectively, but with as little unnaturalness as practicable, directed towards those attainments which are likely to have good or high values under forecasted conditions of participations in such civilized life.

4. Within the United States are some twenty-five million children from four to sixteen years of age; of another group, there are fifteen million from sixteen to twenty-five years of age. Steadily increasing proportions are seeking to extend their earlier learnings or to add new learnings under the auspices of teachers and schools to the end that they may serve both themselves, their associates, and their commonwealths better because of such learnings.

In these millions, in their needs and potentialities, are to be found the final sources of all realistic valuations of learnings. Twenty-five years from now these millions will compose the central dynamic corps of our citizens from thirty to fifty years of age. On them chiefly will, then, be falling the burdens of rearing families, making cities and States more effective agencies of human welfare, producing ample economic wealth to maintain high standards of living for all, widening and deepening hundreds of kinds of human knowledge, and reinterpreting those spiritual out-reachings of men which beget philosophies and religions.

The equipments of learnings acquired by these millions, aged between birth and twenty-five years, will constitute largely the foundation walls of the structures and the essential machineries through which they are to make their contributions, first towards keeping in good shape their inheritances from their predecessors and, next, in adding to and

further perfecting those inheritances as means of greatest good to the greatest number.

5. The "goods," the things of worth, the valued means and felt ends of men are of many kinds—some material, some spiritual, some easy of attainment, some of obviously intermediate character, and some of relatively final significance. Neither the social sciences, seeking to interpret the collective well-beings of men, nor the psychical sciences, seeking to interpret the individual personalities of men, can as yet provide more than crude and very tentative descriptions of either relatively proximate or the relatively ultimate values of civilized men. Such terms as security, health, wealth, righteousness, beauty, knowledge, and progeny suggest possible categories; so also do such terms as self-realization, social approval, liberty, justice, self-expression, social solidarity, personal integration, the beautified life, and others.

Hence, large proportions of the learnings of which individuals are capable are consciously valued or disvalued by the learners themselves (in their maturity), or by their elders on their behalf (in their immaturity), as means to the valued ends of life. But some learnings, e.g., knowledge or beauty "for its own sake," may seem to have all the qualities of final or end values in themselves—satisfaction of curiosity, hunger for beauty, joy in creative expression, pride in achievement visible to one's fellows. Hence, also, learnings can well be classified and appraised in terms of their prospective functionings as contributive to particular genera of human well-being—health, personal security, possession of wealth, communion with God, fine progeny, things cherished because of beauty, liberty, justice, or social approval.

6. Towards the better functioning of the learnings achieved by individuals in the larger collective service of societies, certain kinds of similarities of learnings, of harmonizations of learnings, of present unifications of learn-

ings as these are first assimilated and then made functional in the overt behaviors of multitudes of men, seem to be indispensable. These harmonizations or social integrations become increasingly necessary, even urgent, in proportion as the important works, pleasurings, and self-culturings of men come to be achieved in even larger proportions through extensive and complex team coöperations of persons.

These much desired integrations of learnings—learnings of knowledge, of beliefs, of feeling-charged attitudes, of basic valuations—seem to be relatively easy of achievement, even presently on a world-wide basis, in all those areas of human possessions where *knowledge*, somewhat strictly defined, has been arrived at—knowledge of the movements of the planets, of the causes of diphtheria, of the controls of lightning, of the facts of soil fertilization, of the procedures essential to steel making, of the realities of five-century-old histories.

But such integrations are yet difficult to achieve on a large scale where, because of lack of tested knowledge, learnings must consist largely of beliefs, ideals, sentiments, and inspired valuations. In these areas cults, parties, sects, coteries, unions, and clubs tend strongly to multiply in all large and complex social situations, each as the jealous custodian of some or many of these extrascientific components of the social inheritance, and each so determined to perpetuate them through the learnings induced in the young that they frequently forbid public or nonpartisan agencies to touch upon or impart learnings in these areas at all.

A DISCUSSION OF CRITERIA OR STANDARDS OF EDUCATIONAL VALUE WITH SPECIAL REFERENCE TO WOODWORKING

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A discussion of educational value presupposes a person or persons, a field of knowledge or branch of subject matter, and a situation which involves them both. I will approach this question of value, therefore, by involving myself in an activity within the field of woodworking.

As I sorted through the mahogany short blocks, recently, matching certain pieces that seemed well suited to my needs, I ran across a piece that was different. It had been in the stock all year and had doubtless been laid aside a great number of times by the boys as they sought the *best* for their purposes. This piece of wood may be assumed, therefore, to have been considered valueless countless times. Even relatively inexperienced persons take note of certain qualities that appeal to them even before they are able to assign reasons for their choices. The very word "select" implies a weighing of values. Experiences make a person more selective in definitely restricted areas.

I reached for the piece of wood in response to the visual stimulus of different color which I noted under the rough-sawn surface. My verbal response was "Ah! A piece of walnut." It was comparatively heavy and my storehouse of memories about wood immediately supplied the information "fairly hard." I looked at it closely and discovered, almost hidden under the rough exterior, a very unusual grain. Immediately the thought presented itself, "This is a piece of walnut burl, too valuable to be left here to be spoiled by boys." Coincident with the thought, came the almost mechanical response of taking it to a place of safe-keeping.

The piece was irregular in shape, being approximately four inches thick and twelve inches long. Its width was three inches at one end and five at the other. The possibilities for using such a piece of wood began presenting and eliminating themselves at once. The piece was definitely limited in size. There wasn't another to match it. Obviously certain things could not be done. Turning would waste too much of the stock. The greatest possibilities were found along the lines of greatest wood surface. This would necessitate slabbing the piece into thin strips. When this was done, the pieces were laid out and matched somewhat in the fashion of working a crossword puzzle. The former suggestions of box and tray gave way to tilt-top table. The pieces could be arranged nicely as a veneer for a small pie-crust-edge table top. With the suggestions narrowed down and the decision made, the challenge of building up the top was too great to be deferred to the indefinite "some time." It had to be done immediately.

When the surface was planed and the grain stood out nicely, boys, who had thought the piece without value, vied with each other in sanding it to a high polish. More often than not the word "gorgeous" was used as descriptive of the appearance of the completed top. Wood that was unnoticed before now attracted attention. The difference was the result of the application of, a specialized knowledge and skill within a definitely restricted area. This application of knowledge and skill, extended over a period of time and carried on before boys, was so unusual and striking in its effects upon them that they were interested in following its progress. Interest in observation soon developed into interest in participation with an increase of a certain measure of definite knowledges and skills. Perhaps the greatest learning for the boys was a concomitant appreciation of the nature and possibility of an imaginative use of wood.

There was also a corresponding increment of apprecia-

tion and emotional tone in such an accomplishment for me after twenty years experience in woodworking. I value new knowledges, new methods, and newly developed skills in cabinet-making in a way that I could not have done in the beginnings of my experience. I am sensitive to suggestion and I thrill to new insights.

Would I, therefore, say that such an experience is a desirable educational experience for all boys and girls? Obviously, of course, but with reservations! In this instance the greatest value accrued to me, who had the interest, saw the possibility, had the knowledge and skill, and did the work through every step and every minor detail to the end with its attendant emotional satisfactions. A great deal less of value accrued to the boys who were actively interested and who helped out with the drudgery of sanding to a polish. There were those, however, whose attention followed the progress of the work or whose attention was called to the final result, whose value was measured only by an indifferent to mild, or moderate, aesthetic response, similar to that of seeing a green mountainside, blue expanse of water, or a picture in a museum.

There is, therefore, no one standard of value *for all* in any field or area of educational learning. It is foolish of us to expect it and futile to try to attain it.

Would I insist upon all pupils having contact with such an experience? Obviously not! My very insistence might have turned the positive learnings of those who got the greatest benefit into negative learnings of resentful resistance. It is certain that those who got little from following the experience would have received less of value by being forced into the situation.

As I look over the whole field of knowledges and skills in woodworking they all have value for me and I am glad that I possess them. I anticipate learning more about the field. But woodworking has been a kind of composite avocational-vocational hobby for me. I think of the times I have

spent and the benefits I have derived from working in wood, and my heart quickens. But there is a fly in the ointment! I have found out that there is music, that there is modeling, that there is painting, that there is gardening, that there is dancing, and that there are countless other activities, each divisible in itself. My warmth is diffused with the cold realization that there is too much of life's art activity of value left for me to do little about except to sample in the time I have left before me. My very strength is my weakness. I am holding woodwork a hostage for other values. I do not regret it. Each one of us needs one art in which to excel. Each one of us needs many arts for sampling, for placing our chosen art in proper perspective, for variety and relief and added zest for it when we continue to pursue it.

There is no gainsaying that the price I pay for skill in wood is a lack of knowledge, a lack of skill, and a lack of breadth in the other arts. I cannot insist, therefore, that any definite knowledge or any definite skill in woodwork is essential or desirable for all, or any one individual, without a smile and a waiving of personal integrity.

I believe in the educational value of woodwork. I would give every one a chance to seek this value in so far as he is intellectually and emotionally inclined. I would help him to make progress successfully from one endeavor to another. I would bring in knowledges and skills, and kinks and devices, whenever they are applied to his particular problem. I would be more interested in his doing, in his best way, with help if necessary, what he started out to do. But I can never be interested in *fundamental knowledges and skills* because they are fundamental only because of my narrow, restricted, habituated view of my own specialty—because I am thinking of woodworking fundamentals rather than educational fundamentals. I am, I hope, an educator and not a woodworker first or even second. I am interested in all of humanity and its art

education, of which woodwork is only a very small part.

When I begin to think of boys and girls I begin to think of their eager pursuit of some activity because of its special appeal and their special interest in doing some particular phase of it. They must choose, they must identify themselves with the activity whole-heartedly or they would better be playing "tiddledy-winks" or thinking about nothing in particular. I am eager to have work in process that may be seen and tried out. I am eager to stimulate by suggestion, by reference material, by model, and by other means. I will do all I can to interest people in woodwork and to help them over barren beginnings. I am interested in helping people learn, but I am not interested in teaching woodwork. The province of the arts is the province of self-education.

I can find values everywhere in woodwork, but aside from relatively unimportant isolated learnings I see nothing that cannot be shared by music and by gardening. My approach is an individual teacher and pupil contact upon a common-sense basis which treats the pupil as a rationally intelligent being able to seek some of the values which I have found for myself. I am confident that he will find them without my too great solicitude if he will but give himself a chance by an adequate trial of the possibilities within the field. I am just as happy if he decides that his dish is music instead of woodwork and takes to it with zest.

Art is personal and criteria of value, or standards of value, of art knowledges and participations, are personal values. I want nearly everything to say about my own, and little to say about your art values. I want help when I feel a need for it, and will seek it and receive it with grateful appreciation. I think too much of art, however, to wish to kill it by hand-feeding it to you as I see it and as I like it. My attitude is rather "let us play with art together."

PATRIOTISM AND THE SELECTION OF VALUES FOR A PHASE OF CIVIC EDUCATION

EARLE L. HUNTER

To the wise and scientific or near-scientific selection of values for civic education there is no greater obstacle than the way in which any activity called patriotic is blindly accepted as a vitally necessary element in good citizenship. By reason of the traditional importance of patriotism for the success of the group, the mere naming of any activity as patriotic tends to make its performance mandatory. This should not be interpreted as sufficient ground for condemning or destroying outright all or any patriotic values. But it is sufficient ground for undertaking careful analyses of these values. Investigation as to whether or not these values are consistent with desirable citizenship should enable educators to select for teaching elements of worthy political membership, with a minimum of interference from a vague, undefined, sentimental patriotism.

In discussing the relations of patriotism to the problem of civic education, we are confronted with the fact that patriotism has come, through the long history of its use, to be a term of very broad and uncertain meaning. Therefore, this paper is specifically addressed to the analysis of the values striven for in one phase or type of the complex of reactions indicated by the term patriotism. In an earlier study of patriotic attitudes,¹ the writer found that a large number of attitudes were concerned with the powers of the Federal Government of the United States. It is with this aspect of patriotism and its influence on civic education that this article deals.

The attitudes discovered may be roughly summarized as being directed towards the development of a full, submissive, and unquestioning allegiance to the Federal Govern-

¹"A Sociological Analysis of Certain Types of Patriotism: A Study of Certain Patriotic Attitudes, Particularly as These Appear in Peace-Time Controversies in the United States."

ment of the United States. The significance of this generalized value can be made clearer by giving several groups of the more concrete attitudes found in the study already referred to:

The patriotic citizen should be ready to do the bidding of his government.

He should at all times trust his government officials.

He must accept the fundamental plan of his government and be faithful to the Constitution of the United States.

The fundamental form of the government should remain unchanged.

Such fundamental principles as the separation of church and state must be observed.

The government must be given undivided allegiance.

Freedom of speech must be limited if it is used to interfere with the government of the country.

Unquestioning obedience must be given to laws adopted, and none of the demands of the government may be resisted.

If all of the citizens of the United States acted consistently with the attitudes listed above, it is clear that the Federal Government would be placed upon a pedestal whence, within the limits set by the Constitution, it could, with unassailable right, control the activities of the country. And since, according to these attitudes, the judicial branch of the government is also beyond criticism, constitutional limitations could easily be modified so that the government would become practically omnipotent.

It may be argued that attitudes of this kind are an obvious distortion of true patriotism. In treatises on politics, in the planned curricula of schools, such attitudes may find little place; may indeed be definitely controverted. They may come to definite expression only in times of crisis or near crisis. The large majority of the people of the country may never verbally profess holding attitudes of this kind. Few people, on thoughtful analysis, would probably attribute to the government such broad powers and such wide immunity from criticism. But there is clear evidence in the attitudes actually found that the government should be regarded as having sweeping power. Consciously or subconsciously, people think and act at times in accordance with the attitudes stated above. Also, there is

evidence that such behavior acquires additional influence from its inclusion as a phase of desirable patriotic conduct. Whether found in the definite plans of the schools or not, the influence of these attitudes is sure to find its way into the work of the classroom.

Our problem then is: Recognizing the existence of attitudes which would give to the Federal Government broad and unassailable power over the activities of the citizens, and recognizing the peculiar influence of such attitudes due to their being construed as a part of the complex of patriotic attitudes, how shall the schools of the nation proceed in training citizens with respect to the powers of the government? Shall educational practice subscribe to the values presented above and train future citizens to think and act accordingly? Here is a clear issue which the curriculum maker must consider; an issue in civic education that is full of difficulties because of the conflicting interests involved.

Let us examine sociologically the significance of the behavior presented here, and consider the advisability of alternate behaviors with respect to the powers of government. In defense of endowing government with broad powers, it may be urged that, under the representative institutions of the United States, the electorate has sufficient controls to safeguard itself against a misuse of power by the government. Do not the people, those who have the right of suffrage, decide the policies of the government? On principles which the people will accept, the candidates for office make their campaigns for election. And if those principles are not carried out in the making and the execution of laws, those elected will be repudiated at the polls. Such is the theory of representative government. By this theory ultimate power or sovereignty lies in the hands of the people. They in their capacity as citizens are the state, and if the government infringes on their privileges, they have reserved to themselves the right to destroy and rebuild it.

But this theory of popular control over the exercise of power by the government faces many chances of frustration

in actual political practice. To name just a few of the more obvious chances for frustration: Candidates for office are elected by and represent the majority of the voters only. In any given election, the minority, even though it be just short of one half of the electorate, is without effective power over the policies of the government. And this does not take into account the fairly frequent instances in which a minority, by the plurality principle in voting, decides an election. Then also, there must be considered the activities of political parties and bosses whereby the voters frequently if not regularly are given no real choice. Party politics submerge the vital issues and in their place offer the voters straddling and meaningless compromises. At any rate, the nominating machinery usually results in the naming of candidates by a very small inner circle of party leaders, so that the candidates for office do not represent the actual choice of the people. Consider next the activities of officials after they are elected. Even where they have had real contact with the electorate, where they are named and do campaign for principles in which the voters are interested, because of the number of issues and because of the confusion arising from the combination of local and state elections with those for the National Government, the mandate of the people is not clear. Consequently, decisions of officials frequently do not represent even a composite of the opinions of the people. Then, too, new issues are constantly developing so that during their official tenure the representatives of the supposedly sovereign electorate must decide what course to follow in terms of their own judgment or in obedience to the dictates of political bosses. Again, decisions having far-reaching consequences for the people are frequently made by administrative officials who are appointees of appointees of elected officials. Nor can we overlook the wide interpretative powers exercised by judges who, once appointed, serve for many years.

In view of these realities in the functioning of representative government, it is clear that effective power does not lie in the hands of the people. The elected and appointed

officeholders are the real wielders of power as well as judges of what powers they shall attempt to exercise. In fact, acceptance of this state of affairs is shown in the attitudes collected by the writer. Readiness to do the bidding of government officers, implicit trust and faith in them, unquestioning obedience to the demands of the government, limitation of free speech where it is used to criticize the government—such attitudes as these fit into a scheme in which the government is viewed as having a very free hand rather than into one where the people think of themselves as the active controllers of governmental power.

On the assumption of democratic political institutions that governments exist not as masters but as servants of the people to work for the general welfare, the attitudes outlined at the beginning of this article seem to be distortions of patriotism with respect to the issue of what powers shall be exercised by the government. It is clear that education for responsible citizenship cannot permit so-called patriotic enthusiasm to inculcate beliefs and attitudes favorable to the exercise of unlimited power by the government. But this is largely a negative conclusion. Obviously the government must have certain powers to carry out its functions in the social order. Just this point of what functions it is thought necessary for the state to perform gives the clue to making positive suggestions as to the attitudes with respect to governmental power which the schools, in the opinion of the writer, should teach.

Stated in general terms, with particular reference to the United States, the special functions of the Federal Government seem to be defense and offense against foreign enemies of the state area, maintenance of order and the administration of justice within the state, operation or regulation of certain services of a public character.

The first of these, protection against external enemies, is one of the oldest if not the original function of the state or of its closest forbears. For the exercise of this function the government of the state historically has had practically unlimited power. But by reason of the tech-

nical development of warfare, armed conflict between nations threatens such widespread danger and disaster to whole populations that the final or absolute right of a government to declare war has been seriously questioned. Because of the significance of the question, it has been urged that war should not be declared except on the basis of a referendum. In this way, it is argued, there would be a possibility of checking minority interests urging war for their immediate advantage. And while propaganda might influence the majority, yet the opportunity would be given to the electorate to express itself.

While the declaration of war might be decided by a referendum in some cases, the exigency of actual invasion would probably have to be met by an immediate call to arms on the part of the executive branch of the government. In such cases only is it clear that the citizens should be taught to accept the unqualified right of the government to declare war.

After war is declared, it is generally felt that the government of the state should have conclusive power to co-ordinate and administer all the factors necessary to a successful prosecution of the war. Here serious issues arise. Shall the government have the power to draft for army service all it deems fit? Shall it be empowered to conscript wealth, industrial organizations, and labor? Shall it have the right to control, as it sees fit, freedom of expression and to spread propaganda to further its success in the field without regard to truth? Unlimited power for the government in the prosecution of war means the right to do all of these things. The United States in the World War exercised the first and third of these powers with only slight limitations; but attempted only partial control over industry.

What attitudes shall the schools teach with respect to such powers? This question can be answered only according to the answer to another more fundamental question of educational aims. Shall the schools aim to produce an attitude consistent with the prevailing opinion on this issue

of governmental powers in war time, or shall they strive to develop attitudes antagonistic to war? If the former, they will teach submission in war time to all the dictates of the government. If war is to be discouraged, there is no surer way than for the schools to teach a very critical attitude towards all activities in war time, and to encourage, on the ground of the greater good of the nation, the refusal to submit to all kinds of conscription. To urge against this alternative that nations have historically had absolute power in war time and that a realistic view of the world today condemns such teaching as idealistic and impractical internationalism is merely to argue for the continuance of the *status quo*. But the force of these arguments can be nullified only if schools are willing to assume a rôle of leadership towards a new order of society. If they are so willing, and if they teach a critical attitude towards governmental powers in war time, the government will be forced to reckon with it. Thus a condition with respect to the making of war will be created that is as realistic as are the traditional precedents for broad governmental prerogatives in the conduct of war. Such are the general lines along which the educational policy maker must make his decisions as to the attitudes to be taught with respect to the war-making powers of the government. If the government is to be endowed with unrestricted power in war making, attitudes expecting that power will be taught. If the government is to be limited by the expressed judgment of its citizens in the declaration and prosecution of war, appropriate attitudes will be inculcated. The prospective voter would then be taught to weigh the consequences of war, to expect to exercise his referendum rights for or against war, unless war were for repelling actual invasion, and to exercise his critical powers over the method of prosecuting a war once it has been initiated.

With respect to the second function of government listed above, the maintenance of order and the administration of justice within the state, the issues are more complicated, because the range of activity involved is much larger and

more complex. One guiding thesis can be laid down in the beginning, however. If the government is regarded not as possessed of absolute power, but rather as an agent for the performance of certain necessary functions, then there is no absolute source from which may be derived the rules of order or the kind of justice which is to be the goal of state activity. Government according to absolute and inviolable principles will not secure true order and justice. These are gained by the use of rules that will coördinate fairly the interests of the people of the state area. This means that constitutions, laws, and the interpretation of laws must be worked out in terms of the activities of the citizens. In other words, order and justice are functions of the existent social relationships. The government then must be given such power as is necessary to establish and to maintain that order that seems, under the critical oversight of the citizens, to be the best under the circumstances. Consequently, the educator will strive to inculcate attitudes consistent with the government's preserving order and administering justice to the advantage of the people of the country generally; and to teach attitudes making possible an easy modification of the legal structure when the good of the populace as a whole seems to demand such change. This is quite different from teaching that the government should have absolute power or that the demands of order and justice are satisfied by adherence to precedent practice; for order on this basis simply amounts to preservation of the *status quo* whether consistent with the needs of the people or not.

The situation is somewhat similar with respect to the third division of the specific functions of the government given above—the operation or regulation of certain services of a public character. It requires but a glance at the history of any one state or only a superficial comparison of different states at the same time to note great variation in the performance of this type of function. Certain services regarded as vital to the community, and therefore performed by the government in one case, are merely regu-

lated by the government in another or are left entirely to the field of private initiative to be controlled only in such ways as the community has worked out through non-political techniques. The developments in the United States during the first Congressional session of the present administration are instructive in this connection. With a general disregard for the American individualistic tradition, Congress delegated to the President broad powers of political control, many of them to be exercised in lesser or greater degree at his discretion only. Why is this not an example showing that a government has the right to assume power when and as it deems necessary or desirable? But this suggestion is readily controverted by the consideration that any attempt at such an increase of its powers in the bright days before the cataclysm of 1929 would have brought on the Government of the United States the earliest possible repudiation. The recent expansion in the political operation and regulation of services is most certainly not a case of assuming powers that already belonged to the government by implication. On the contrary, it would be far more truthfully described by saying that various groups in the country asked the government to assume power they had formerly regarded as their inalienable right won by generations of devotion to free, private endeavor. In other words, the services administered by the government depend upon the prevailing social philosophy and upon the exigencies of the group situation.

The attitudes to be taught with respect to this function of government can then be formulated thus: To the government must be granted such power as will be needed to perform those services which the state community judges can be performed best by political means. The citizenry must be taught to permit the government to perform certain functions, but not to feel that any activity their governmental officers decide upon is for that reason only a necessarily legitimate field for political control.

On the basis of extensive study and the foregoing analysis, the writer suggests the following summary of fundamental

principles for the guidance of civic education in developing attitudes and ideals with respect to governmental powers. The state should be recognized and regarded as one of the important and probably as the most important of the institutions of society for the ordering of its activities. This fundamental, positive function should be properly emphasized to develop loyalties to the state as satisfying certain group needs. The group needs to be met by state action are those suggested by the three groups of functions mentioned above. With reference to defense the government of the state must be empowered to meet swiftly with armed force invasion of the national domain or actual armed insurrection against the federal government. Whether other difficulties and problems of the federal state should be met by recourse to war, the citizens should expect to decide by popular referendum. Again, citizens should be trained to feel that the use of all war-time powers such as conscription, extraordinary control over labor, industry, or wealth, regulation of speech and of the press should remain under the critical oversight of the citizens; that the government of the state shall not be regarded as having a conclusive right to assume these powers unless it is clear that a majority of the citizens wish to delegate such powers to the government. In the maintenance of order and the administration of justice, governmental power should be exercised for the good of the community in general rather than for the interests of limited groups exclusively. The attitude should be developed that the laws of the state are but those rules of social behavior that for the time seem best calculated to further the general welfare when administered through the political machinery. This attitude will also serve as the basis for civic education with respect to the third general function of the political state, that of performing or regulating certain social services; e.g., schools, means of communication, health, and so forth. The extent of state activity in this field must be expected to change as conditions demand. The citizens should then be trained to think that

certain specific powers are granted to the government by the people; that power is not there to be assumed or declined by the government at its will, but only at the behest of the people. The government is, then, a creation of the people of the state area to bring about through political machinery social coöperation in certain phases of the life of the community. This is the ultimate principle in accordance with which civic education should proceed.

It should be clear now that the concept of citizenship education contemplated by the writer has for its fundamental method the teaching of ideals and attitudes rather than attempting to develop in all the skill and knowledge required to solve the complex problems involved in organizing and limiting the field of political activity. Further, the indifferent results in the development of citizenship that have come from the vague, general teaching of patriotism indicate that the building of civic ideals and attitudes will succeed only indifferently if it is expected to result incidentally from classroom discussions about forms and processes of government or the technical problems of legislation. Experience seems to indicate that to be effective education in this field must be functional; that is, it must be formulated in terms of the necessary job: the inculcation of attitudes and ideals. Moreover, these attitudes will have to be developed specifically; that is, in terms of concrete cases. The general attitudes suggested above are, of course, the goals of civic education rather than its starting point or the outline of its daily method. Our emphasis on building specific attitudes is not to be interpreted as denying the value or as arguing against the advisability of whatever strengthening of the attitudes and ideals for citizenship may come from a more largely cultural study of social science. Let that be given in doses just as strong as the patients can stand! But, if the schools are to fulfill one of their supremely important public functions, the values suggested here by the analysis of governmental powers will have to be given a very prominent and a very definite place in the practice of teaching.

SIBLING RESEMBLANCE IN SOCIAL ATTITUDES

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Sibling resemblances in physical traits, in mental traits, in handwriting qualities, in educational achievement, in deceptive behavior, etc., have been studied. The results (*see* Table I) indicate resemblance between siblings which can be measured in terms of a correlation coefficient of around .35 as compared to a correlation of 0 for unrelated pairs.

TABLE I
Some Previous Studies on Sibling Resemblances

Number of Reference in Bibliography	Investigator	Date of Invest- igation	Trait Studied	Correlations Obtained ¹				Number of Pairs	Remarks
				Brother- Brother	Sister- Sister	Brother- Sister	All Pairs		
1	Hildreth	1925 ^a	I.Q.	..	..	..	.68	1028	
1	Hildreth	1925	E.Q.	..	..	..	.58	188	
1	Hildreth	1925	A.Q.	..	..	..	.32	188	
2	Huestis and Otto	1927	University grades	.74	.61	.04	..	100	
3	Kramer and Lauterbach	1928	Handwriting (quality)	.46	.24	.13	..	101	
3	Kramer and Lauterbach	1928	Handwriting (rate)	.27	.09	.16	..	101	
4	Thorndike	1928	Tests of se- lective and rational thinking, general- ization, and or- ganiza- tion						
5	Willoughby	1928	Opposites	.45	.29	.30	.60	1,800	The r reported is esti- mated
5	Willoughby	1928	Number— series				..	140	
5	Willoughby	1928	completion	.45	.46	.31	..	140	
5	Willoughby	1928	Arithmetic reasoning	.37	.26	.37	..	140	
5	Willoughby	1928	Symbol— series	.31	.31	.31	..	140	
5	Willoughby	1928	completion	.47	.21	.28	..	140	
5	Willoughby	1928	Sentence meaning	.29	.28	.16	..	140	
5	Willoughby	1928	Geometric forms	.31	.30	.28	..	140	
5	Willoughby	1928	Analogies	.30	.48	.36	..	140	
5	Willoughby	1928	Symbol— digit						
5	Willoughby	1928	Science— nature in- formation	.53	.38	.23	..	140	
5	Willoughby	1928	History— literature informa- tion	.47	.44	.31	..	140	
5	Willoughby	1928	Checking similar- ities	.16	.42	.27	..	140	

Number of Reference in Bibliography	Investigator	Date of Investigation	Trail Studied	Correlations Obtained				Number of Pairs	Remarks
				Brother- Brother	Sister- Sister	Brother- Sister	All Pairs		
6	Freeman and others	1928	I.Q.	..	..	..	.34 .25	125	.34 is r obtained by age entry; .25 by double entry.
7	Jones	1928	I.Q.	..	..	..	.49	828	There were only 317 children but in- vestiga- tor used maxi- mum number of pairs and double entry.
8	May and Hartshorne	1928	Deception in be- havior A ¹	..	..	..	.225	370	
8	May and Hartshorne	1928	Deception in be- havior C ⁴	..	..	..	.440	246	
8	May and Hartshorne	1928	Deception in be- havior P ⁵	..	..	..	.400	402	
8	May and Hartshorne	1928	Deception in be- havior H ⁶	..	..	..	.705 Approx.	345	
9	McFadden	1929	I.Q.	..	..	..	.80	..	
10	Sims	1931	I.Q.	..	..	..	.44 .40	203	.44 r obtained by age entry; .40 by double entry.
11	Carter	1931	Arithmetic tests Vocabulary tests	..	..	..	.21 .35	108 families	
12	Burks and Tolman	1932	I.Q.	..	..	..	.45	34	Like— appear- ing sib- ling pairs of ele- mentary schools.
12	Burks and Tolman	1932	I.Q.	..	..	..	.67	32	Like— appear- ing sib- ling pairs of jr. and sr. high school.
12	Burks and Tolman	1932	I.Q.	..	..	..	.61	52	Unlike —ap- pearing sibling pairs of jr. and sr. high school.

¹These are Pearson r's.

²Investigations previous to 1925 summarized in this study.

³Behavior A—speed test—possibility of deceiving by adding scores after time is called.

⁴Behavior C—copying test—possibility of copying from a key or answer sheet.

⁵Behavior P—peeping—deception measured by pupils opening eyes or peeping.

⁶Behavior H—securing help on a test taken at home after being definitely instructed not to get help from any source. The high r obtained may be due to collusion.

NOTE—Most I.Q.'s reported are based on the Stanford-Binet.

These results have provoked argument both for and against the influence of heredity and for and against the influence of environment. Would an analysis of sibling resemblance in social attitudes throw further light on this problem as well as on the relative effectiveness of several environmental factors which tend to influence attitudes?

It is quite inconceivable to postulate that social attitudes are a result of certain hereditary factors. One is not favorably inclined towards the recognition of Soviet Russia by the United States because of a certain arrangement of genes in the chromosomes. It must be, then, that a favorable attitude towards the recognition of Soviet Russia is due either to a certain acquisition of facts relative to the case or to certain environmental factors which play their part in influencing a person towards or away from this particular social value.

In this study an attempt is made to determine the effect of two of these environmental factors—that of the home and the school. When siblings are compared with unrelated children who are of approximately the same age, the same sex, attend the same school, and live in the same locality, and it is found that siblings show a greater resemblance in social attitudes than unrelated pairs, it can be argued that the factor which accounts for this greater resemblance is a common home environment. It can also be argued that whatever relationship is found for unrelated children must be due to the factor of a common school environment.

CONDITIONS OF TESTING

The testing was done under standard conditions in the classroom by people who were experienced with standard testing situations. The test was given to the regular students with the instructions that Columbia University was interested in finding out what the attitudes of high-school students were and that, upon completion of the testing, the

blanks would be sent directly to the University. There had been no special circumstances to influence the attitudes of the students previous to this testing. By this method, it was felt that truthful responses would be obtained from the students since there was no fear of endangering student status because the school authorities would not see their papers.

NATURE OF THE DATA

The social attitudes of about 4,000 high-school pupils in ten senior high schools were measured by the Neumann, Kulp, and Davidson International Attitudes Test.⁷ This is a paper-and-pencil test of 108 items which relate to international, interracial, political, and social problems. The test has a reliability ranging from .870 to .943. The final score is an average of all the endorsed statements—a low score indicating a liberal attitude, and a high score a conservative attitude.

On the Sims Home Background Test (which was also given to this group), one of the questions asked is: "If you have brothers or sisters in this school, write their names and grades on these lines." In this manner, it was possible to determine accurately the sibling pairs used in this study.

Nine of the ten high schools from which the sibling data were drawn are located in the State of Pennsylvania. The tenth is located in southern New Jersey, near Philadelphia. All the schools represent about the same type of community—suburban-residential. The students were in the tenth, eleventh, and twelfth grades of the high school. Their ages ranged from 13½ to 19½ years.

TREATMENT OF THE DATA

The group studied consisted of 91 pairs of brothers, 85 pairs of sisters, and 155 pairs of brothers and sisters—making a total of 331 pairs. Included in the 331 pairs

⁷Published by the Bureau of Publications, Teachers College, Columbia University.

are ten families of three siblings each. In these instances, all possible combinations were inserted for the purpose of computing the correlations. There were also nine pairs of twins in the data. These were included because it was found that their exclusion made no difference in the correlation coefficients (*see* Table II).

TABLE II
Sibling vs. Nonsibling Resemblance in Social Attitudes
Correlation Coefficients

	Sibling Pairs			Random Pairs		
	Number of Pairs	Age ^a Entry	Number of Pairs	Double Entry	Number of Pairs	Age Entry
Brothers.....	91	.29 ± .06 ^b	182	.29 ± .05	88	.11 ± .07
Sisters.....	85	.41 ± .06	170	.39 ± .04	82	.02 ± .07
Brother vs. sister.....	155	.30 ± .05	310	.30 ± .03	150	-.16 ± .05
All pairs.....	331	.32 ± .03	662	.32 ± .02	320	-.05 ± .04

^aWhen the nine pairs of twins are excluded, the *r*'s are, respectively, .27, .40, .29, .31.

^bIt is somewhat difficult to compute the probable errors for the above correlations due to the fact that certain individuals entered the correlation tables more than once (the ten families of three siblings each). However, the error involved is very slight and the correction would probably not change the probable error more than one point in the second decimal.

Since there is still some doubt as to what is the best method to use in computing intraclass correlations, it was decided to present the results for both the age-entry method and the double-entry method. In the age method, the younger of a pair was placed on the y axis and the older on the x axis. In the double-entry method, the older and younger of each pair were placed on both axes, thus forming a symmetrical table with *N* equal to the number of entries.

The random pairs were made up as follows: In tabulating the data, the older sibling was listed in one column and the younger in another column, keeping schools, as well as sisters, brothers, brothers and sisters, on separate lists. To make up the random pairs, one list was inverted; that is, the first name on one list was paired with the last on the other list, the second name was paired with the one next to the last, etc. In case of an odd number of names, the middle pair had to be dropped since they were true siblings. This accounts for the difference in number of random pairs and in the number of sibling pairs. Thus the random pairs are identical, with respect to school, sex, and age with the sibling pairs.

RESULTS

From Table II, it is clearly seen that resemblance of siblings in social attitudes can be measured by a correlation coefficient of about .32 and resemblance of random pairs can be measured by a coefficient of about 0.00.

The age-entry and the double-entry methods in the case of the sibling pairs give identical results and, therefore, it was unnecessary to use the double-entry method in calculating the correlation coefficients for the random pairs. This indicates probably that age (within this narrow range) is not a factor in social attitudes. In fact, it was found that the mean attitude score of 331 younger siblings was 3.79 and the mean attitude score of 331 older siblings was 3.78.

The range of attitude scores for this group was from 2.4 to 4.7. It is possible to obtain scores on this test as low as 1.6 (liberal) and as high as 6.4 (conservative). It may be that if a group were studied whose age range was greater—thus probably making for a greater range in attitude score—the r obtained between siblings would be higher than here reported. The r 's, as given, are all uncorrected. It was felt that corrections for attenuation would be untenable considering the size of the correlation coefficients.

It may be said that with an r of .32, the resemblance between siblings amounts to 5 per cent ($1 - \sqrt{1 - r^2}$) while with an r of 0, obtained for random pairs, the resemblance amounts to 0 per cent. Although this difference is small, it is, nevertheless, worth while to inquire what the cause is of even this small difference.

INTERPRETATION

It is comparatively easy to argue that resemblance in intelligence between siblings is due mainly to a similar heredity and only slightly to a similar environment. But this is not so in the case of social attitudes. Whatever

similarity is found among siblings must be due to a similar environment. And since unrelated children in the same school who live in the same locality are found to show no resemblance, then, the resemblance found between siblings must be due to certain factors present in the home. It is not the purpose of this paper to say definitely what these factors are although one can readily think of such things as the parents' attitude as reflected in their conversation, the kinds of magazines and books brought into the home, the occupation of the father, the family income, etc. It is hoped in a future study to control the factors of I.Q. and home background (as measured by the Sims test) by making up random pairs who have the same I.Q. and home background. Sims (10) compared unrelated children matched for home background, age, and school and found a correlation between intelligence quotients of about .30 instead of the usual correlation of 0.00. He argues, therefore, that a common environment produces an r of .30 while the addition of a common parentage raises the r to about .42 (the r obtained between siblings).

This is certain, then, that the home is, in general respects, more potent in influencing social attitudes than the school. This fact becomes still more surprising when the age of the subjects of this study is considered. It would seem that by the time a person reaches the senior high school, his attitude would be more greatly influenced by the school than by the home.

Another question may be raised. Why do sisters show a greater resemblance in social attitudes than do brothers? Obvious explanations for this greater resemblance are that sisters are probably more closely supervised by the home and so are more influenced by it and also that their experiences outside the home are likely to be more alike than in the case of brothers. Possibly experiences both outside the home and outside the school are as potent as the combined influence of the home and the school. Such experi-

ences may be: seeing a movie, meeting an impressive person of another race, reading a story.

The resemblance of siblings in social attitudes is somewhat less than sibling resemblance in physical traits or in intelligence and about the same as resemblance in school achievement and deception. But does not the likeness of correlation between attitudes and siblings and intelligence and siblings raise questions as to the so-called hereditary character of intelligence? Or as in attitudes, deception, and school achievement, does the similarity of correlations indicate a social causation of intelligence or suggest the necessity for a sociological definition of intelligence?

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RESEARCH PROJECTS AND METHODS IN EDUCATIONAL SOCIOLOGY

In order that this section of THE JOURNAL may be of the greatest possible service, its readers are urged to send at once to the editor of this department titles—and where possible descriptions—of current research projects now in process in educational sociology and also those projects in kindred fields of interest to educational sociology. Correspondence upon proposed projects and methods will be welcomed.

RESEARCH IN EDUCATION

The extent of educational research in recent years has been very great. There has obviously been a growing tendency to attempt to make education scientific and to base it upon the findings of research. The quality of this research has varied. There is no question, however, but that educational research in general needs to take stock of itself and to make progress in the direction of objectivity and of applying itself to vital problems. In an article on "Research and the Schools," Robert A. Davis¹ has made some very pertinent and important observations on this question in an attempt to evaluate the needs and methods of research in this field.

The following paragraph is quoted from Mr. Davis's article to indicate the growth and extent of educational research.

In education last year 4,651 research studies which represent an expenditure of more than \$10,000,000 in time and money were made. In addition to university presses, commercial houses, and a large number of public school-research bureaus which publish findings of investigations, there are approximately fifteen periodicals in the fields of psychology, sociology, physiology, and medicine which publish investigations relating to problems in education. Analysis of such sources from their beginning to the present gives a fair index of the amount and character of research produced in this country. It is also possible from such study to trace accurately the development of the scientific movement in education. An examination of thirteen periodicals within the field of education, psychology, sociology, and medicine shows more than 15,000 studies which bear upon educational problems. As further evidence of this extraordinary growth in research new periodicals continue to appear.

¹*Journal of Educational Research*, April 1933, p. 561 ff.

WORLD'S FAIR RESEARCH CONFERENCE

From June 26 to June 29, 1933, the American Sociological Society coöperated with the Society for Social Research in holding a series of morning round tables of research at the University of Chicago. The program included reports on researches in progress as well as discussions of methods and techniques of research. This occasion was of particular interest because of the joint meetings of the American Sociological Society, the American Statistical Association, and Section K of the American Association for the Advancement of Science which presented a distinguished program at the evening meetings.

The research sessions were organized around the following topics:

1. Graphic Presentation and Map Making
2. The Family
3. Rural Sociology
4. Crime
5. Collective Behavior
6. Minimum Standards of Training in Research Techniques
7. Experimental Social Psychology
8. Prediction and Forecasting

NEW YORK STATE RESEARCH CONFERENCE

On May 1, 1933, the second annual educational research conference was held under the auspices of the Research Division (under the directorship of Dr. Warren W. Coxe) of the University of the State of New York of the State Education Department at Albany. The following program was presented under the chairmanship of Dr. George D. Strayer, Director, Institute of Educational Research, Teachers College, Columbia University.

"The Attitudes of Municipal Officials Towards Public Education"

William P. Capes, Secretary, Conference of Mayors, Albany, N. Y.
Discussion: R. B. Raup, Teachers College, Columbia University,
New York, N. Y.

"Implications for Education Growing Out of a Study of Young Criminals"

Walter N. Thayer, Jr., Department of Correction, Albany, N. Y.

Discussion: Frederic M. Thrasher, School of Education, New York University, New York, N. Y.

"Economic Lessons from the Depression and Their Bearing on Education"

Sidney Wilcox, Department of Labor, Albany, N. Y.

Discussion: Harold Clark, Teachers College, Columbia University, New York, N. Y.

"Types of Educational Research Which are Needed to Meet Present Problems"

Paul J. Kruse, Cornell University, Ithaca, N. Y.

Discussion: Harry P. Smith, Syracuse University, Syracuse, N. Y.

JUVENILE DELINQUENCY RESEARCH

The National Recreational Association² has released a list and brief description of thirty-seven studies in juvenile delinquency. These researches represent a section from the compilation of research projects in recreation and physical education made by the Recreation Department of the Russell Sage Foundation.

The studies deal with a wide variety of subjects. Some of these are the effects of motion pictures on delinquency, runaway boys, crime prevention through education, the relation of spare time to delinquency, and neighborhood and family influences in the deduction of juvenile delinquency.

²315 Fourth Avenue, New York City, Bulletin 2853.

BOOK REVIEWS

Industry and Society, by ARTHUR JAMES TODD. New York: Henry Holt and Company, 626+xiv pages.

For those who are seeking to understand and appraise modern industrialism from the point of view of fact rather than theory, this book will be of inestimable value. It is divided into five major parts: first, the detailed indictment of modern industrialism by various types of critics; second, a brief review of the socio-historical aspects of the machine age; third, a review of the impact of industrialism upon the Far East to determine whether certain stigmata of capitalistic machine industry are inherently necessary; fourth, a detailed study of such social problems as wages, insecurity, and health in their relation to industry; fifth, proposed antidotes and remedies for its alleged "evils."

A History of the Economic Institutions of Modern Europe, by FREDERICK L. NUSSBAUM. New York: F. S. Crofts and Company, 1933, 448 pages.

In this book Professor Nussbaum makes a most notable contribution to the study of economic history. For the first time we have presented to us not the cut-and-dried material which has always dismayed teachers of economic history, but rather fresh and invigorating ideas which attempt to subject European economic development to a reasoned analysis. The book itself is divided into four parts: Precapitalistic Economy, The Foundations of Modern Capitalism, Early Capitalism, and Capitalism Dominant.

What Professor Nussbaum has tried to do is to provide for the student an introduction to Werner Sombart's *Der Moderne Kapitalismus* which unfortunately has not as yet been translated into English. The author follows Sombart closely and intelligently, thus providing a text which should prove a Godsend to teachers who have been searching for the right book.

Collective Bargaining in Chicago, 1929-1930, A Study of the Economic Significance of the Industrial Location of Trade-Unionism, by C. LAWRENCE CHRISTENSON. No. 27, Social Science Studies. Chicago: The University of Chicago Press, 1933, 396 pages.

Part of the author's work was to get the figures with which to locate in what industries unions were relatively strong. He has a chapter on each of the main industry groups. For each industry he notes the factors which make for or against union strength and also analyzes the current collective agreement. The chapters are filled with detail, interesting to the student. The conclusion perhaps contains nothing startlingly new, but reminds us again that the factory is after all not the place to look for the American unionist.

Emergency Work Relief, by J. C. COLCORD, WILLIAM C. KOPLOVITZ, and RUSSELL H. KURTZ. New York: Russell Sage Foundation, 1932, 286 pages.

This volume describes the programs of emergency work relief—"relief given in return for work performed"—as carried out in 26 American communities during 1930-1931 and makes suggestions for setting up an effective work-relief program. The survey was made by the charity-organization department of the Russell Sage Foundation at the request of former President Hoover's Organization for Unemployment Relief.

Forced Labor in the United States, by WALTER WILSON. New York: International Publishers Company, 1933, 192 pages.

Defining forced labor as "work that is done by a worker in the absence of a 'free contract' between himself and his employer," Mr. Wilson discusses in a very interesting manner the various types of forced labor found at the present time in the United States. Among the subjects treated are convict labor, the chain gang, and peonage. Much has been written recently about these but Mr. Wilson has done a worthwhile job in gathering the various scattered materials.

Women in the Twentieth Century, by SOPHONISBA P. BRECKINRIDGE. New York: McGraw-Hill Book Company, Inc., 1933, 364 pages.

This monograph is a rather extensive elaboration of the material comprised in Volume I, Chapter XIV, of *Recent Social Trends*, which was prepared by the same author. The volume is divided into three parts: Part I, Women's Use of Spare Time; Part II, Women and Gainful Employment; Part III, Women and Government. The entire publication is readable, informative, and an excellent source of information on all the topics included. From no other single source would it be possible to secure such adequate information.

Immigration, by LAWRENCE G. BROWN. New York: Longmans, Green and Company, 1933, 388 pages.

Seeks to determine the extent to which, in the process of adjustment to the American social culture, the immigrant's cultural heritage helps or hinders. A study of the processes of the adjustment of racial minorities to a modern, complex civilization. The author assumes two phases basic to this process of adjustment; namely, the social nature of the immigrant and the social situation to which adjustment must be made. In the development of these phases of the problem of immigrant adjustment the author discusses in the first part of the book "immigra-

tion and human nature" and in the second "the periods of immigration and the types of immigrants indicating the peculiar problem of adjustment which each group faces."

Slums, Large-Scale Housing and Decentralization, by President's Conference on Home Building and Home Ownership. Washington, D. C., 1932, 245 pages.

This volume is easily one of the best of the series of reports issued by the President's Conference on Home Building and Home Ownership. After a graphic description of housing conditions in slum areas, the report discusses the need for remedying these conditions, pointing out the incidence of the damages caused by slums and blighted areas. There is a very useful discussion of the problems involved in getting rid of such districts, as well as a comprehensive treatment of the various aspects of large-scale operations together with a brief statement on the condition of different model housing projects already in operation.

Farm and Village Housing, by President's Conference on Home Building and Home Ownership. Washington, D. C., 1932, 293 pages.

Most people think of a housing problem as primarily an urban one. It comes as somewhat of a surprise, then to learn that "in general, the farmhouse has lagged behind the city house in the essentials of sanitation, convenience, and comfort." Having made a comprehensive survey of the physical conditions of rural housing, the relation of such housing to health, the questions of financing and insurance, and the cost of the dwellings, the Committee on Farm and Village Housing comes to the conclusion that the major causes of the lower standard of rural housing are "long-established home habits and a good deal of mental inertia." It points out that education and research are essential for a solution of the problem and lays down the beginnings of a remedial program.

Negro Housing, by President's Conference on Home Building and Home Ownership. Washington, D. C., 1932, 282 pages.

The literature on the subject of Negro housing is amazingly scant. The report of the President's Conference, then, comes as a most welcome addition to the literature in the field. In the completeness of its survey and in the thoroughness of its analysis it has no peers among the books on Negro housing. In view of the conditions portrayed the recommendations appeared strangely timid. However, it should be remembered that the composition of the committee would have rendered impossible agreement on a more comprehensive program for reform.

BOOKS RECEIVED

- Adjustment and Mastery*, by ROBERT S. WOODWORTH. New York: The Century Company.
- Adolescent Boy*, by WINIFRED V. RICHMOND. New York: Farrar and Rinehart.
- Art of Educational Research*, by HAROLD H. ABELSON. Yonkers-on-Hudson, New York: World Book Company.
- Auditorium Social Arts*, by HARRY GRAVES MILLER and NEWTON W. CHAFFEE. Boston: D. C. Heath and Company.
- Children, Why Do We Have Them*, by DORA RUSSELL. New York: Harper and Brothers.
- Citizens' Organizations and the Civic Training of Youth*, by BESSIE LOUISE PIERCE. New York: Charles Scribner's Sons.
- Culture and Human Behavior*, by SANFORD WINSTON. New York: Ronald Press Company.
- Development of Learning in Young Children*, by LOUISA C. WAGONER. New York: McGraw-Hill Book Company, Inc.
- Displacement of Men by Machines*, by ELIZABETH FAULKNER BAKER. New York: Columbia University Press.
- Dynamics of Therapy*, by JESSIE TAFT. New York: The Macmillan Company.
- Educational Frontier*, by WILLIAM H. KILPATRICK, et al. New York: The Century Company.
- Educational Leadership*. Eleventh Yearbook, Department of Superintendence of the National Education Association, February 1933. Washington: National Education Association.
- Energies of Men*, by WILLIAM MCDUGALL. New York: Charles Scribner's Sons.
- Evolving Common School*, by HENRY C. MORRISON. Inglis Lecture, 1933. Cambridge: Harvard University Press.
- The Family*, by KATHERINE DUPRE LUMPKIN. Chapel Hill: University of North Carolina Press.
- Fitting the School to the Pupil*, by PAUL R. MORT, W. W. WRIGHT, and W. B. FEATHERSTONE. New York: Bureau of Publications, Teachers College, Columbia University.
- From Chaos to Control*, by SIR NORMAN ANGELL. New York: The Century Company.
- Genetic Psychology*, by A. R. GILLILAND. New York: Ronald Press Company.
- Great Technology*, by HAROLD RUGG. New York: John Day Company.
- Handicapped Child*. Publication of the White House Conference on Child Health and Protection. New York: The Century Company.
- High School Curriculum Reorganization*, edited by L. W. WEBB, et al. Ann Arbor, Michigan: North Central Association of Colleges and Secondary Schools.
- History of Norwegian Literature*, by THEODORE JORGENSEN. New York: The Macmillan Company.
- In Place of Profit*, by HARRY F. WARD. New York: Charles Scribner's Sons.

- Individual and the Community*, by WEN KWEI LIAO. New York: Harcourt, Brace and Company.
- Introductory Sociology*, by CHARLES H. COOLEY, ROBERT C. ANGELL, and LOWELL J. CARR. New York: Charles Scribner's Sons.
- Lateral Dominance and Visual Fusion*, by CHARLES A. SELZER. Cambridge: Harvard University Press.
- Metropolitan Community*, by R. D. MCKENZIE. New York: McGraw-Hill Book Company, Inc.
- Modern Woman and Sex*, by RACHELLE S. YARROS. New York: The Vanguard Press.
- Our Social World*, by GRACE A. WALLIS and WILSON D. WALLIS. New York: McGraw-Hill Book Company, Inc.
- Policewoman's Handbook*, by ELEONORE L. HUTZEL. New York: Columbia University Press.
- Problems of Education in the United States*, by CHARLES H. JUDD. New York: McGraw-Hill Book Company, Inc.
- Provisions for Mentally Atypical Pupils*, by CHARLES W. ODELL. Urbana: Bureau of Educational Research, University of Illinois.
- Psychology*, by FREDERICK L. LUND. New York: Ronald Press Company.
- Religion Today*, edited by ARTHUR L. SWIFT. New York: McGraw-Hill Book Company, Inc.
- Rôle of the Teacher in Personnel Work*, by RUTH STRANG. New York: Bureau of Publications, Teachers College, Columbia University.
- Saint Ignatius and the Ratio Studiorum*, by EDWARD A. FITZPATRICK. New York: McGraw-Hill Book Company, Inc.
- Science and Human Life*, by J. B. S. HALDANE. New York: Harper and Brothers.
- Social Beliefs and Attitudes of American School Board Members*, by CLAUDE E. ARNETT. Emporia, Kansas: Emporia Gazette Press.
- Social Studies Instruction*, by ROBERT E. SWINDLER. New York: Prentice-Hall, Inc.
- Social Work Yearbook*, 1933, edited by FRED S. HALL. New York: Russell Sage Foundation.
- Some Basic Statistics in Social Work*, by PHILIP KLEIN, with the collaboration of Ruth Voris. New York: Columbia University Press.
- Talents and Temperaments*, by ANGUS MACRAE. New York: D. Appleton and Company.
- Under the Fifth Rib*, by C. E. M. JOAD. New York: E. P. Dutton and Company, Inc.
- Why Have Delinquents*, by KENYON J. SCUDDER and KENNETH S. BEAM. Los Angeles: Probation Office, County of Los Angeles, California.
- Youth and Sex*, by MEYRICK BOOTH. New York: William Morrow and Company.

